

What is claimed is:

1. A method for providing control of at least one camera to at least one network user, comprising,
providing at least one network link between the at least one camera and the at least one network user,
providing at least one interface to the at least one network user,
generating camera control commands based on data from the at least one interface,
providing the camera control commands to the at least one camera, and,
utilizing the at least one network link to provide the at least one network user with data based on the at least one camera.
2. A method according to claim 1, wherein providing at least one network link between the at least one camera and the at least one network user includes providing at least one network link based on supporting at least one of fiber optic, infrared, satellite, Radio Frequency (RF), microwave, cable, or Internet Protocol (IP) communications.
3. A method according to claim 1, wherein providing at least one interface to the at least one user includes providing at least one applet to the at least one network user.

Patent 6,332,660

4. A method according to claim 1, wherein providing at least one interface to the at least one user includes providing at least one application to the at least one network user.

5. A method according to claim 1, wherein providing at least one interface to the at least one user includes providing at least one of a graphical user interface, a database interface, a scripting interface, a menu driven interface, or a text-based interface.

6. A method according to claim 1, wherein providing at least one interface to the at least one user includes providing a control area having a cursor that the at least one user can activate and thereafter control the at least one camera.

7. A method according to claim 1, wherein generating camera control commands based on data from the at least one interface includes,

determining a cursor position, and

translating the cursor position to camera control commands.

8. A method according to claim 1, wherein generating camera control commands based on data from the at least one interface includes determining whether a cursor is active or inactive.

9. A method according to claim 1, wherein generating camera control commands based on data from the at least one interface includes computing at least one of pan, tilt, focus, zoom, and camera preset commands based on the interface data.

10. A method according to claim 1, wherein providing the camera control commands to the at least one camera includes transmitting the camera control commands using the at least one network link.

11. A method according to claim 1, wherein utilizing the at least one network link to provide the at least one network user with data based on the at least one camera, includes providing the at least one network user with at least one of compressed or uncompressed analog, digital, and streaming audio and visual data based on the at least one camera.

12. A method according to claim 1, further including selecting one of the at least one network users from which to provide control of the at least one camera.

13. A method according to claim 1, further including implementing a queue for providing distributed control of the at least one camera amongst the at least one network users.

14. A graphical user interface (GUI) for providing control of at least one camera by at least one network user, the at least one

network user and the at least one camera being connected by at least one communicative network link, the GUI comprising,
a control area,
a cursor confined within the control area, and,
a calibration module for generating camera control commands based on the cursor position with the control area.

15. A GUI according to claim 14, further including an origin designation within the control area.

16. A GUI according to claim 14, further including at least one focus button for increasing and decreasing camera focus.

17. A GUI according to claim 14, further including at least one zoom button for increasing and decreasing camera zoom.

18. A GUI according to claim 14, further including controls for camera presets.

19. A GUI according to claim 14, further including at least one location preset designation for directing the camera to a fixed location.

20. A GUI according to claim 14, wherein the cursor further includes an active mode and an inactive mode.

21. A GUI according to claim 14, wherein the control area further includes a coordinate system for mapping cursor position to camera control commands.
22. A GUI according to claim 14, wherein the control area further includes a coordinate system for mapping cursor position to pan and tilt camera control commands.
23. A method for administering control of at least one camera to at least one network user, comprising,
- providing at least one queue for association with the at least one camera,
 - receiving a request from one of the at least one network users for control of the at least one camera,
 - associating the request with one of the at least one cameras, and
 - conditionally placing the at least one network user in the at least one queue associated with the request.
24. A method according to claim 23, further including determining whether the request is from a subscriber user or a non-subscriber user.
25. A method according to claim 23, further including associating a camera control time interval with the request.

26. A method according to claim 23, further including assigning priority to the request based on the at least one network user providing the request.

27. A method according to claim 23, further including providing camera control to the next user in the queue.

28. A method according to claim 23, wherein conditionally placing the at least one network user in the at least one queue associated with the request further includes determining that the at least one network user is authorized to request control of the at least one camera.

29. A method according to claim 23, wherein conditionally placing the at least one network user in the at least one queue associated with the request further includes determining whether the at least one network user is a subscriber.

30. A method according to claim 23, further including usurping control of the camera from the at least one network camera.

31. A method according to claim 23, further including providing an indication to assume camera control to the at least one network user.

32. A method according to claim 31, wherein providing an indication includes sending a message via a network for display to at least one network user.

33. A method according to claim 31, wherein providing an indication includes causing an audio sound to be provided to at least one network user.

34. A system for providing remote control of at least one camera by at least one network user, comprising:

at least one initiating device for providing access to the at least one network user over a network, the initiating device having a display for displaying, an interface for providing camera control data, and, video data from the at least one camera,

at least one server to receive the camera control data from the at least one initiating device, to provide the camera control data to the at least one camera, to receive at least one of audio and video data from the at least one camera, and to provide at least one of the audio and video data to the at least one network user, and

instructions for translating the data from the at least one initiating device, to instructions for moving the at least one camera.

35. A system according to claim 34, wherein the at least one initiating device further includes at least one processor.
36. A system according to claim 34, wherein the at least one camera further includes at least one processor.
37. A system according to claim 34, further including at least one queue associated with the at least one camera.
38. A system according to claim 34, further including instruction for determining from which of the at least one network users to receive camera control data.
39. A system according to claim 34, wherein the interface includes at least one of a graphical user interface (GUI), a database interface, a scripting interface, a menu driven interface, or a text-based interface.
40. A computer product for providing control of at least one camera to at least one network user, the computer product disposed on a computer readable medium and having instructions for causing a processor to,
- provide at least one network link between the at least one camera and the at least one network user,
 - provide at least one interface to the at least one network user,

generate camera control commands based on data from the at least one interface,
provide the camera control commands to the at least one camera, and,
utilize the at least one network link to provide the at least one network user with data based on the at least one camera.

41. A computer product according to claim 40, wherein instructions to provide at least one network link between the at least one camera and the at least one network user include instructions to provide at least one network link based on supporting at least one of fiber optic, infrared, satellite, Radio Frequency (RF), microwave, cable, or Internet Protocol (IP) communications.

42. A computer product according to claim 40, wherein instructions to provide at least one interface to the at least one user include instructions to provide at least one applet to the at least one network user.

43. A computer product according to claim 40, wherein instructions to provide at least one interface to the at least one user include instructions to provide at least one application to the at least one network user.

44. A computer product according to claim 40, wherein instructions to provide at least one interface to the at least one user include instructions to provide at least one of a graphical user interface, a database interface, a scripting interface, a menu driven interface, or a text-based interface.

45. A computer product according to claim 40, wherein instructions to provide at least one interface to the at least one user include instructions to provide a control area having a cursor that the at least one user can activate and thereafter control the at least one camera.

46. A computer product according to claim 40, wherein instructions to generate camera control commands based on data from the at least one interface include instructions to, determine a cursor position, and translate the cursor position to camera control commands.

47. A computer product according to claim 40, wherein instructions to generate camera control commands based on data from the at least one interface include instructions to determine whether a cursor is active or inactive.

48. A computer product according to claim 40, wherein instructions to generate camera control commands based on data from the at least one interface include instructions to compute

at least one of pan, tilt, focus, zoom, and camera preset commands based on the interface data.

49. A computer product according to claim 40, wherein instructions to provide the camera control commands to the at least one camera include instructions to transmit the camera control commands using the at least one network link.

50. A computer product according to claim 40, wherein instructions to utilize the at least one network link to provide the at least one network user with data based on the at least one camera, include instructions to provide the at least one network user with at least one of compressed or uncompressed analog, digital, and streaming audio and visual data based on the at least one camera.

51. A computer product according to claim 40, further including instructions to select one of the at least one network users from which to provide control of the at least one camera.

52. A computer product according to claim 40, further including instructions to implement a queue for providing distributed control of the at least one camera amongst the at least one network users.

53. A computer for administering control of at least one camera to at least one network user, the computer product disposed on a computer readable medium and having instructions for causing a processor to,

provide at least one queue for association with the at least one camera,

receive a request from one of the at least one network users for control of the at least one camera,

associate the request with one of the at least one cameras, and,

conditionally place the at least one network user in the at least one queue associated with the request.

54. A computer product according to claim 53, further including instructions to determine whether the request is from a subscriber user or a non-subscriber user.

55. A computer product according to claim 53, further including instructions to associate a camera control time interval with the request.

56. A computer product according to claim 53, further including instructions to assign priority to the request based on the at least one network user providing the request.

57. A computer product according to claim 53, further including instructions to provide camera control to the next user in the queue.

58. A computer product according to claim 53, wherein instructions to conditionally place the at least one network user in the at least one queue associated with the request further include instructions to determine that the at least one network user is authorized to request control of the at least one camera.

59. A computer product according to claim 53, wherein instructions to conditionally place the at least one network user in the at least one queue associated with the request further include instructions to determine whether the at least one network user is a subscriber.

60. A computer product according to claim 53, further including instructions to usurp control of the camera from the at least one network camera.

61. A computer product according to claim 53, further including instructions to provide an indication to assume camera control to the at least one network user.

62. A computer product according to claim 61, wherein instructions to provide an indication include instructions to

send a message via a network for display to at least one network user.

63. A computer product according to claim 61, wherein instructions to provide an indication include instructions to cause an audio sound to be provided to at least one network user.

64. A system for providing remote control of at least one camera by at least one network user, comprising:

means for providing access for at least one network user to a network, the means for providing access having a display for displaying,

an interface for providing camera control data, and, video data from the at least one camera,

processor means to receive the camera control data from the at least one initiating device, to provide the camera control data to the at least one camera, to receive at least one of audio and video data from the at least one camera, and to provide at least one of the audio and video data to the at least one network user, and instructions for translating the data from the at least one initiating device, to instructions for moving the at least one camera.

65. A system according to claim 64, wherein the means for providing access includes at least one processor.

✓ Add a1

FILED 2011 03 20 10 30 AM '11